



Service/Product Provider

Dome-Tech Group

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Business: Engineering Services/Energy Consultation

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Industrial Partner

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Business: Pharmaceuticals

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Dome-Tech's retro commissioning efforts lead to Merck's implementing an HVAC control strategy resulting in annual savings of over \$230,000.

Project Scope

Dome-Tech used a rigorous retro commissioning process to identify variances from the design energy baseline of a newly constructed laboratory facility, and recommended solutions for minimizing Merck's energy consumption.

Project Summary

The retro commissioning of the laboratory facility process highlighted possibilities for energy savings. The process discovered that the once-through air exchange system to ensure safe venting of fumes was unnecessarily running at all times. Dome-Tech also recommended that Merck use existing control technology to reset the temperature in 150 laboratory suites during off-peak/unoccupied times by 3° F. Rather than using only time-based system controls, the Building Automation System (BAS) allows occupants to override the system during off-peak hours using the light switch in their lab.

- **Energy Savings**

\$230,000/year or 31,200 MMBtu's/year

- **Investment**

\$135,000 initial investment, no recurring investment

- **Financial Return**

Payback was achieved in 7 months

- **Other Benefits**

This has been identified as a Best Practice and a site standard for 3 other facilities. System overrides were simplified by giving lab employees control, this also made employees comfortable with the upgrades as Maintenance involvement is not needed to override the system during off-peak hours.

Monitoring & Verifying Energy Savings:

Through the Building Automation System, Dome-Tech and Merck were able to see immediate results in reduced energy consumption during non-business hours. Lower utility bills confirmed the savings.

Distinguishing Value:

Dome-Tech develops good customer relationships. Because of their good faith history, innovative solutions are expected and welcomed, rather than challenged during project discovery, thus benefiting both parties. The project was non-invasive and Merck manpower was not required to complete the upgrades. The initial cost to Merck was less than expected.